



# CONFORMANCE TEST REPORT FOR EN 301489-1/-6

**Report No.: 60.860.9.040.02E**

Client: Vtech Telecommunications Ltd.  
Product: DECT Phone  
Model: DECT84-C18-B95 (FP)  
Manufacturer/supplier: Vtech Telecommunications Ltd.

Date test item received: 2009/07/16  
Date test campaign completed: 2009/08/25  
Date of issue: 2009/08/26  
Test results: **COMPLIED**

**The test result only corresponds to the tested sample. It is not permitted to copy this report, in part or in full, without the permission of the test laboratory.**

*Total number of pages of this test report: 41 pages*

Approved by

Jeff Pong

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# 1 TEST REPORT CERTIFICATION

Client : Vtech Telecommunications Ltd.  
 Address : 23/F, Tai Ping Industrial Centre, Block 1, 57 Ting Kok Road, Tai Po, Hong Kong  
 Manufacturer : Vtech Telecommunications Ltd.  
 EUT : DECT Phone  
 Model No. : DECT84-C18-B95 (FP)  
 Test Specifications : Emissions  
                                   EN 55022:2006(Class B)  
                                   EN 61000-3-2:2006  
                                   EN 61000-3-3:1995/A2:2005  
                                   Immunity  
                                   EN 61000-4-2:1995/A2:2001  
                                   EN 61000-4-3:2006/A1:2008  
                                   EN 61000-4-4:2004  
                                   EN 61000-4-5:2006  
                                   EN 61000-4-6: 2007  
                                   EN 61000-4-11:2004  
 Regulations Applied : EN 301489-1:V1.8.1  
                                   EN 301489-6:V1.3.1  
                                   EN 61000-3-2:2006  
                                   EN 61000-3-3:1995/A2:2005

Test Location: T01

The testing described in this report has been carried out to the best of our knowledge and ability, and our responsibility is limited to the exercise of reasonable care. This certification is not intended to believe the sellers from their legal and/or contractual obligations.

## 2 GENERAL INFORMATIONS

### 2.1 Description of EUT:

The Test Candidate is a fixed part with integrated antennas of a cordless telephone system for 3.1 kHz voice-communications on DECT Feature phone-standard. For the integrated antennas a diversity-switch is included to the equipment. This fixed part (FP) is used in combination with a portable part (PP) for connections to the analogue public switched telephone network.

### 2.2 Related Informations of EUT:

Power Supply : Input: AC 100~240Vac, 50/60Hz, 0.2A. Output: DC 7.5V, 300mA

---

Cables dedicated for EUT:

Power Line : ☒ Nonshielded ☐ Shielded ☐ None , length: 1.8 m

Control Line : ☐ Nonshielded ☐ Shielded ☒ None , length:        m

TEL. Line : ☒ Nonshielded ☐ Shielded ☐ None , length: 1.5 m

\* For more detailed features, please refer to *User's Manual*.

### 2.3 Modification Record:

No modifications were required. (That mean the EUT has complied with the requirement as tested.)

### 3 SUMMARY OF TEST RESULTS

#### 3.1 Emissions:

##### 3.1.1 Conducted Emissions

■-PASS

Peak EMI value to the limit: -3.5 dB at 0.787 MHz

##### 3.1.2 Radiated Emissions

■-PASS

Peak EMI value to the limit: -4.6 dB at 760.901 MHz

##### 3.1.3 Harmonics Current Emissions

■-PASS

The harmonics current values were under the limits of the class A equipment of the EN 61000-3-2.

##### 3.1.4 Voltage Fluctuations and Flicker

■-PASS

The voltage fluctuations and flicker values were under the limits of the EN 61000-3-3 requirements.

## 3.2 Immunity:

### 3.2.1 Immunity Criteria:

The results of all of the immunity tests performed on the EUT were evaluated according to the following criteria, and according to the manufacturer's specifications for the EUT:

#### **Performance criterion for Continuous Phenomena applied to DECT Phone Transceivers (CT):**

The BER of the signal as measured shall not exceed  $1 \times 10^{-3}$  during the test sequence. Additionally for equipment containing analogue speech circuits the speech output signal level shall be at least 35dB less than the previously recorded reference level. At the conclusion of the test, the EUT shall operate as intended with no loss of user control functions or stored data and the communications link shall have been maintained during and after tests. Where the EUT is capable of transmission, tests shall be performed to ensure that unintentional transmission does not occur.

#### **Performance criterion for Transient phenomena applied to DECT Phone Transceivers (TT):**

At the conclusion of each exposure the EUT shall operate with no user noticeable loss of the communications link. At the conclusion of the total test comprising the series of individual exposures the EU shall operate as intended with no loss of user control functions or stored data, as declared by the manufacturer, and the communications link shall have been maintained. Where the EUT is capable of transmission, tests shall be performed to ensure that unintentional transmission does not occur.

#### **Performance criterion for Continuous phenomena applied to DECT Phone Receive-only equipment (CR):**

The primary functions shall be verified during each individual exposure in the test sequence. Additionally for equipment containing analogue speech circuits the speech output signal level shall be at least 35 dB less than the previously recorded reference level. At the conclusion of the test, the EU shall operate as intended with no loss of user control functions or stored data, as declared by the manufacturer, and the communications link shall have been maintained. This shall be verified by checking the primary functions.

#### **Performance criterion for Transient phenomena applied to DECT Phone Receive-only equipment (TR):**

At the conclusion of each exposure the EUT shall operate with no user noticeable loss of the communications link. At the conclusion of the total test comprising the series of individual exposures the EUT shall operate as intended with no loss of user control functions or stored data, as declared by the manufacturer, and the communications link shall have been maintained. This shall be verified by checking the primary functions.

**3.2.2 Electrostatic Discharge:****■-PASS**

For transceivers the general performance criteria TT shall apply. For stand alone receivers the general performance criteria TR shall apply. For ancillary equipment the pass/fail criteria supplied by the manufacturer shall apply, unless the ancillary equipment is tested in connection with receivers or transceivers in which case the corresponding performance criteria above shall apply.

**3.2.3 Radio Frequency Electromagnetic Field (80~1000MHz and 1400~2700MHz):****■-PASS**

For transceivers the general performance criteria CT shall apply. For stand alone receivers the general performance criteria CR shall apply. For ancillary equipment the pass/fail criteria supplied by the manufacturer shall apply, unless the ancillary equipment is tested in connection with receivers or transceivers in which case the corresponding performance criteria above shall apply.

**3.2.4 Fast Transients Common Mode:****■-PASS**

For transceivers the general performance criteria TT shall apply. For stand alone receivers the general performance criteria TR shall apply. For ancillary equipment the pass/fail criteria supplied by the manufacturer shall apply, unless the ancillary equipment is tested in connection with receivers or transceivers in which case the corresponding performance criteria above shall apply.

**3.2.5 Surges, Common and Differential Mode:****■-PASS**

For transceivers the general performance criteria TT shall apply. For receivers the general performance criteria TR shall apply. For ancillary equipment the pass/fail criteria supplied by the manufacturer shall apply, unless the ancillary equipment is tested in connection with receivers or transceivers in which case the corresponding performance criteria above shall apply.

**3.2.6 RF Common Mode, 0.15~80MHz:****■-PASS**

For transceivers the general performance criteria CT shall apply. For stand alone receivers the general performance criteria CR shall apply. For ancillary equipment the pass/fail criteria supplied by the manufacturer shall apply, unless the ancillary equipment is tested in connection with receivers or transceivers in which case the corresponding performance criteria above shall apply.

**3.2.7 Voltage Dips and Interruptions:****■-PASS**

For transceivers the general performance criteria CT shall apply. For stand alone receivers the general performance criteria CR shall apply. For ancillary equipment the pass/fail criteria supplied by the manufacturer shall apply, unless the ancillary equipment is tested in connection with receivers or transceivers in which case the corresponding performance criteria above shall apply.



## 4 TEST DATA & RELATED INFORMATIONS

### 4.1 Emissions:

#### 4.1.1 Conducted Emissions Test:

##### 4.1.1.1 Conducted Emissions Test Data:

A. Operating Conditions of the EUT: Talking Mode

Test Date: Jul. 28, 2009

Test Specification	EN 55022:2006 (Class B)		
Test Equipment	Calibration Date		Recommended Recal. Date
EMI Test Receiver\R&S\ESCS30	Aug. 14, 2008		Aug. 13, 2009
LISN\Telemeter\NNB-2/16Z	Mar. 30, 2009		Mar. 29, 2010
LISN\EMCO\37100/2M	Feb. 12, 2009		Feb. 11, 2010
Climatic Condition	Ambient Temperature: <u>25°</u> C      Relative Humidity: <u>52 %</u> RH		
Power Supply System	AC Power: <u>230</u> Vac <u>50</u> Hz		
Test Set-up	Table-top Equipment		

Freq. (MHz)	Meter Reading (dBuV)				Factor (dB)	Result (dBuV)				Limit (dBuV)		Margins (dB)
	Q.P. Value		AVG. Value			Q.P. Value		AVG. Value		Q.P. Value	AVG. Value	Q.P. or AVG
	L1	L2	L1	L2		L1	L2	L1	L2			
0.154	***	40.0	----	----	0.3	***	40.3	----	----	65.8	55.8	-25.5
0.162	46.7	***	----	----	0.1	46.8	***	----	----	65.4	55.4	-18.6
0.291	***	40.1	----	----	0.3	***	40.4	----	----	60.5	50.5	-20.1
0.685	49.8	***	26.9	----	0.1	49.9	***	27.0	----	56.0	46.0	-6.1
0.685	***	46.2	----	13.5	0.3	***	46.5	----	13.8	56.0	46.0	-9.5
0.728	48.4	***	28.8	----	0.1	48.5	***	28.9	----	56.0	46.0	-7.5
0.728	***	49.0	----	8.6	0.3	***	49.3	----	8.9	56.0	46.0	-6.7
0.787	52.4	***	27.3	----	0.1	52.5	***	27.4	----	56.0	46.0	-3.5
0.838	***	46.1	----	12.4	0.3	***	46.4	----	12.7	56.0	46.0	-9.6
0.927	46.2	***	25.8	----	0.1	46.3	***	25.9	----	56.0	46.0	-9.7
3.318	***	38.2	----	----	0.4	***	38.6	----	----	56.0	46.0	-17.4
3.466	38.3	***	----	----	0.1	38.4	***	----	----	56.0	46.0	-17.6

Notes: 1) Place of measurement: EMC LAB. of the ETC (1F)

2) The EUT was placed 0.8m above reference ground plane.

3) Example calculation: result for 0.154 MHz:  $40.0 + 0.3 = 40.3 \text{ dB } \mu\text{V}$

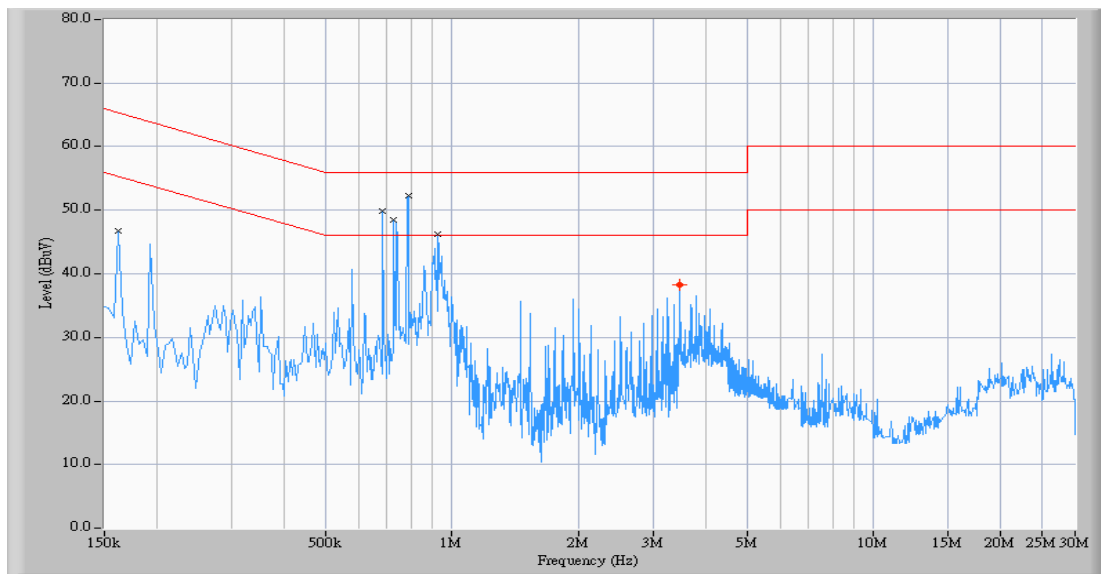
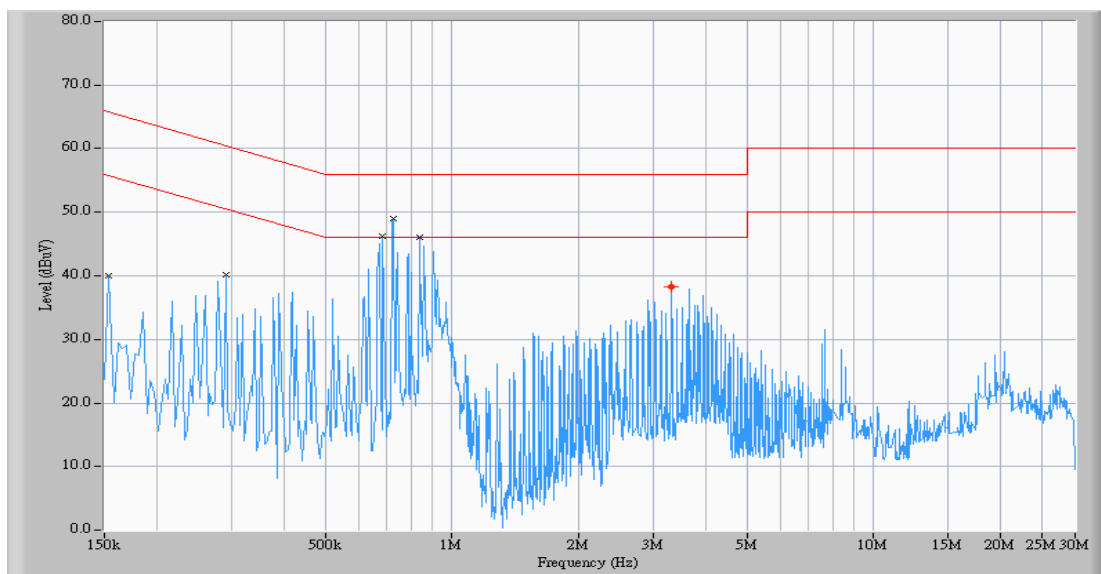
4) ① If the data table appeared symbol of "\*\*\*\*" means the value was too low to be measured.

② If the data table appeared symbol of "----" means the Q.P. value is under the limit for AVG. so, the AVG. value doesn't need to be measured.

③ If the data table appeared symbol of “#” means the noise was low, so record the peak value.

5) The estimated measurement uncertainty of the result measurement is

$\pm 3.6$ , 95%, K=2, (150 KHz-30 MHz)

**Power Line-L1****Power Line-L2**

B. Operating Conditions of the EUT: Talking Mode

Test Date: Jul. 28, 2009

Test Specification	EN 55022: 2006 (Class B)		
Test Equipment	Calibration Date		Recommended Recal. Date
EMI Test Receiver\R&S\ESCS30 Current probe\Schaffner\SMZ11	Aug. 14, 2008 Mar. 31, 2009		Aug. 13, 2009 Mar. 30, 2010
Climatic Condition	Ambient Temperature: <u>25°</u> C      Relative Humidity: <u>52 %</u> RH		
Power Supply System	AC Power: <u>230</u> Vac <u>50</u> Hz		
Test Set-up	Table-top Equipment		

Freq. (MHz)	Meter Reading (dBuA)		Factor (dB)	Result (dBuA)		Limit (dBuA)		Margins (dB)
	Q.P. Value	AVG. Value		Q.P. Value	AVG. Value	Q.P. Value	AVG. Value	Q.P. or AVG.
	ISN	ISN		ISN	ISN			
0.162	11.2	----	0.1	11.3	----	39.4	29.4	-28.1
0.181	11.2	----	0.1	11.3	----	38.4	28.4	-27.1
0.988	16.7	----	0.1	16.8	----	30.0	20.0	-13.2
8.270	10.8	----	0.2	11.0	----	30.0	20.0	-19.0
14.750	11.7	----	0.3	12.0	----	30.0	20.0	-18.0
23.586	11.9	----	0.4	12.3	----	30.0	20.0	-17.7

Notes: 1) Place of measurement: EMC LAB. of the ETC (1F)

2) The EUT was placed 0.4m above reference ground plane.

3) Example calculation: result for 0.162 MHz:  $11.2 + (0.1) = 11.3 \text{ dB } \mu\text{A}$ 

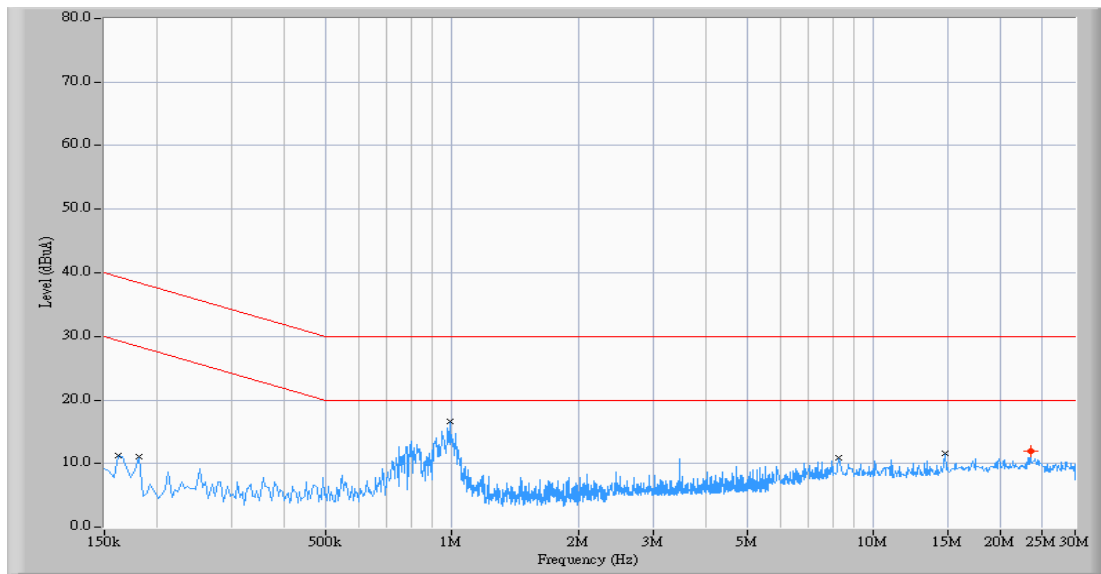
4) ① If the data table appeared symbol of "\*\*\*\*" means the value was too low to be measured.

② If the data table appeared symbol of "----" means the Q.P. value is under the limit for AVG. so, the AVG. value doesn't need to be measured.

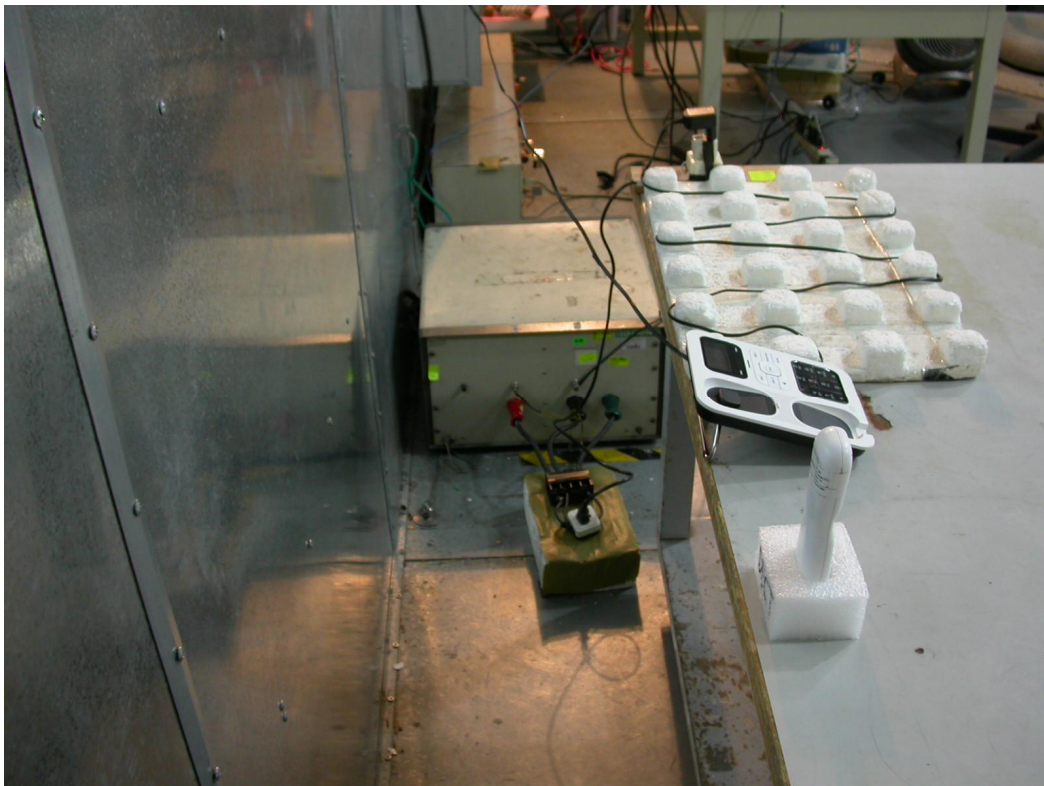
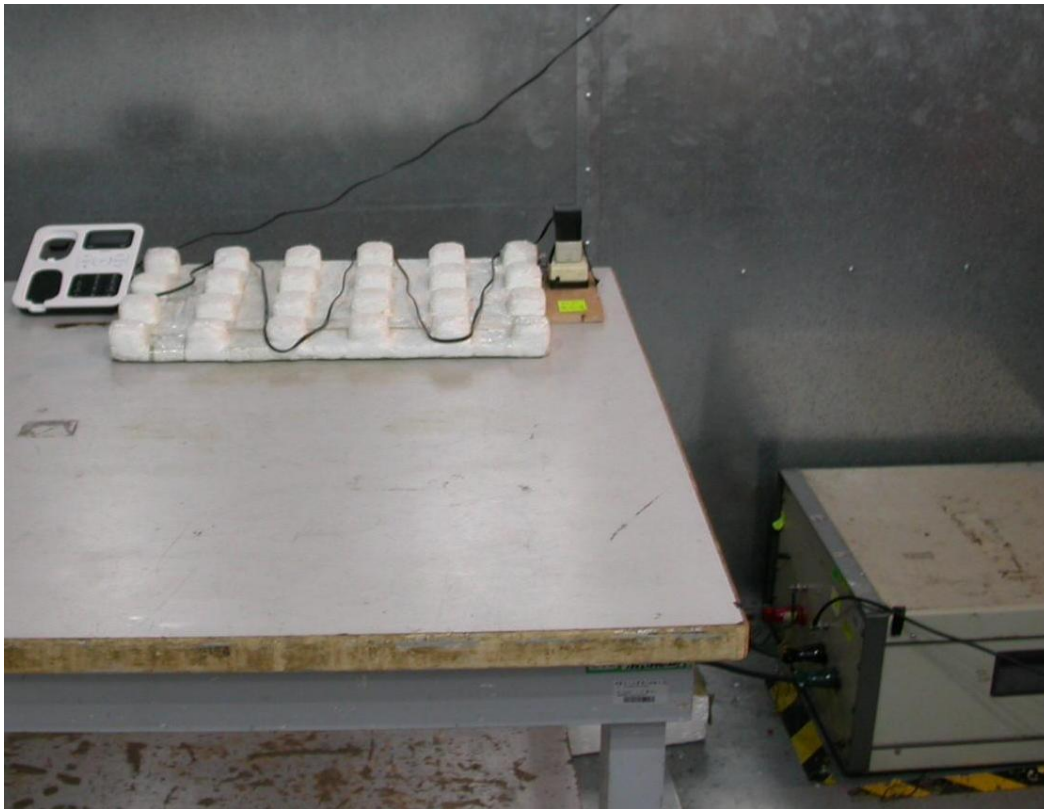
③ If the data table appeared symbol of “#” means the noise was low, so record the peak value.

5) The estimated measurement uncertainty of the result measurement is

 $\pm 3.6$ , 95%, K=2, (150 KHz-30 MHz)

**TEL Line-ISN**

#### 4.1.1.2 Conducted Emissions Test Setup Photos:



**4.1.2 Radiated Emissions Test:****4.1.2.1 Radiated Emissions Test Data:****A. Operating Conditions of the EUT: Talking Mode**

Test Date: Jul. 27, 2009

Test Specification	EN 55022:2006 (Class B)		
Test Equipment		Calibration Date	Recommended Recal. Date
EMI Test Receiver\R&S\ESCS30		Nov. 03, 2008	Nov. 02, 2009
Ant.- LogBiconi\EMCO\3142		May 12, 2009	May 11, 2010
Spectrum\R&S\FSU		Nov. 25, 2008	Nov. 24, 2009
Horn Ant.\EMCO\3115		Jun. 12, 2009	Jun. 11, 2010
Preamp\HP\8449B		Oct. 09, 2008	Oct. 08, 2009
Climatic Condition	Ambient Temperature: <u>31°</u> C		

Measurement Distance: 10 m ( 30MHz~1GHz )

Emission Frequency (MHz)	Meter Reading (dBuV)		CORR'd Factor (dB/m)	Results (dBuV/m)		Limit (dBuV/m)	Margins (dB)
	HOR.	VERT.		HOR.	VERT.		
39.719	2.6	4.1	18.6	21.2	22.7	30.0	-7.3
86.372	***	12.9	8.9	***	21.8	30.0	-8.2
144.689	***	10.5	11.1	***	21.6	30.0	-8.4
168.016	11.6	***	11.0	22.6	***	30.0	-7.4
224.388	***	9.4	13.2	***	22.6	30.0	-7.4
414.889	10.0	***	20.8	30.8	***	37.0	-6.2
550.962	***	2.3	25.5	***	27.8	37.0	-9.2
595.671	5.2	***	26.2	31.4	***	37.0	-5.6
628.717	***	4.1	26.8	***	30.9	37.0	-6.1
733.687	2.3	***	28.9	31.2	***	37.0	-5.8
760.901	3.1	***	29.3	32.4	***	37.0	-4.6

Measurement Distance: 3m (1GHz~6GHz)

Emission Frequency (MHz)	Meter Reading @3m (dBuV)				CORR'd Factor (dB/m)	Max Results (dBuV/m)		Limit @3m (dBuV/m)		Margins (dB)
	HOR.		VERT.			HOR.	VERT.	PK	AV	
	PK	AV	PK	AV						
3796.263	52.1	34.3	52.4	34.6	-3.2	49.2	31.4	74	54	-22.6
5697.694	52.3	34.2	52.7	34.4	-0.4	52.3	34.0	74	54	-20.0

- Notes: 1) Place of Measurement: Measuring site of the ETC (3F)  
2) Measurement Distance: 10 m ( 30MHz~1GHz ), 3m (1GHz~6GHz)  
3) Height of table on which the EUT was placed: 0.8 m  
4) Height of Receiving Antenna: 1 - 4 m  
5) Example Calculation: result for 39.719 MHz  $2.6 + (18.6) = 21.2 \text{ dB } \mu\text{V/m}$   
6) ① If the data table appeared symbol of "\*\*\*\*" means the value was too low to be measured.  
② If the data table appeared symbol of "----" means the Q.P. value is under the limit for AVG. so, the AVG. value doesn't need to be measured.  
③ If the data table appeared symbol of "#" means the noise was low, so record the peak  
7) The estimated measurement uncertainty of the result measurement is  $\pm 5.06, 95\%, K=2, (30 \text{ MHz}-1000 \text{ MHz})$



#### 4.1.2.2 Radiated Emissions Test Setup Photos:



**4.1.3 Harmonics Current Emissions Test:****4.1.3.1 Harmonics Current Emissions Test Data:****A. Operating Conditions of the EUT: Talking Mode**

Test Date: Jul. 23, 2009

Test Specification	EN 61000-3-2: 2006		
Test Equipment		Calibration Date	Recommended Recal. Date
Power Analysis System\California Instruments\ MX45-3PI-413 (PACS-3)		Oct. 02, 2008	Oct. 01, 2009
Climatic Condition	Ambient Temperature: <u>22°</u> C                      Relative Humidity: <u>53 %</u> RH		
Power Supply System	AC Power: <u>230</u> Vac <u>50</u> Hz		
Test Set-up	Table-top Equipment		

<b>Test data see the next page.</b>
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## Current Test Result Summary (Run time)

EUT:

Test category: Class-A per Ed. 2.2 (European limits)

Test date: 2009/7/23

Start time: 上午 09:28:47

Tested by:

Test Margin: 100

End time: 上午 09:31:58

Test duration (min): 3

Data file name: CTSMXL\_H-000493.cts\_data

Comment:

Customer:

Test Result: Pass

Source qualification: Normal

THC(A): 0.021 I-THD(pk%): 447.855

POHC(A): 0.003

POHC Limit(A): 0.251

Highest parameter values during test:

V\_RMS (Volts): 229.97

Frequency(Hz): 50.01

I\_Peak (Amps): 0.202

I\_RMS (Amps): 0.023

I\_Fund (Amps): 0.006

Crest Factor: 11.820

Power (Watts): 1.7

Power Factor: 0.327

Harm#	Harms(avg)	100%Limit	%of Limit	Harms(max)	150%Limit	%of Limit	Status
2	0.006	1.080	0.5	0.008	1.620	0.46	Pass
3	0.005	2.300	0.2	0.007	3.450	0.20	Pass
4	0.005	0.430	1.2	0.007	0.645	1.08	Pass
5	0.005	1.140	0.4	0.007	1.710	0.38	Pass
6	0.005	0.300	1.6	0.006	0.450	1.44	Pass
7	0.004	0.770	0.6	0.006	1.155	0.50	Pass
8	0.004	0.230	1.9	0.006	0.345	1.62	Pass
9	0.004	0.400	1.0	0.005	0.600	0.84	Pass
10	0.004	0.184	2.0	0.005	0.276	1.67	Pass
11	0.003	0.330	1.0	0.004	0.495	0.84	Pass
12	0.003	0.153	2.1	0.004	0.230	1.67	Pass
13	0.003	0.210	1.4	0.003	0.315	1.07	Pass
14	0.003	0.131	2.0	0.003	0.197	1.53	Pass
15	0.002	0.150	1.6	0.003	0.225	1.19	Pass
16	0.002	0.115	1.9	0.002	0.173	1.40	Pass
17	0.002	0.132	1.5	0.002	0.199	1.10	Pass
18	0.002	0.102	1.8	0.002	0.153	1.31	Pass
19	0.002	0.118	1.4	0.002	0.178	1.03	Pass
20	0.002	0.092	1.7	0.002	0.138	1.24	Pass
21	0.001	0.107	1.3	0.002	0.161	0.99	Pass
22	0.001	0.084	1.6	0.002	0.125	1.23	Pass
23	0.001	0.098	1.3	0.001	0.147	1.00	Pass
24	0.001	0.077	1.5	0.001	0.115	1.24	Pass
25	0.001	0.090	1.3	0.001	0.135	1.01	Pass
26	0.001	0.071	1.5	0.001	0.106	1.21	Pass
27	0.001	0.083	1.2	0.001	0.125	1.01	Pass
28	0.001	0.066	1.5	0.001	0.099	1.20	Pass
29	0.001	0.078	1.2	0.001	0.116	0.97	Pass
30	0.001	0.061	1.5	0.001	0.092	1.20	Pass
31	0.001	0.073	1.2	0.001	0.109	0.95	Pass
32	0.001	0.058	1.5	0.001	0.086	1.15	Pass
33	0.001	0.068	1.2	0.001	0.102	0.92	Pass
34	0.001	0.054	1.5	0.001	0.081	1.11	Pass
35	0.001	0.064	1.2	0.001	0.096	0.89	Pass
36	0.001	0.051	1.5	0.001	0.077	1.09	Pass
37	0.001	0.061	1.2	0.001	0.091	0.87	Pass
38	0.001	0.048	1.4	0.001	0.073	1.03	Pass
39	0.001	0.058	1.2	0.001	0.087	0.84	Pass
40	0.001	0.046	1.3	0.001	0.069	0.97	Pass

#### 4.1.3.2 Harmonics Current Emissions Test Setup Photos:



**4.1.4 Voltage Fluctuations and Flicker Test:****4.1.4.1 Voltage Fluctuations and Flicker Test Data:****A. Operating Conditions of the EUT: Talking Mode**

Test Date: Jul. 23, 2009

Test Specification	EN 61000-3-3:1995/A2:2005		
Test Equipment		Calibration Date	Recommended Recal. Date
Power Analysis System\California Instruments\ MX45-3PI-413 (PACS-3)		Oct. 02, 2008	Oct. 01, 2009
Climatic Condition	Ambient Temperature: <u>22°</u> C		

	Test Data	Limit	Pass or Fail
<b>Plt</b>	0.070	0.65	Pass
<b>Pst</b>	0.160	1.00	Pass
<b>dt</b>	0.00%	3.3 %	Pass
<b>dmax</b>	0.00%	4.0%	Pass
<b>dc</b>	0.00%	3.3%	Pass

#### 4.1.4.2 Voltage Fluctuations and Flicker Test Setup Photos:



## 4.2 Immunity:

### 4.2.1 Electrostatic Discharge:

#### 4.2.1.1 Electrostatic Discharge Test Data:

A. Operating Conditions of the EUT: Talking Mode

Test Date: Aug. 25, 2009

Test Specification	EN 61000-4-2: 1995/A2:2001		
Test Equipment		Calibration Date	Recommended Recal. Date
ESD Simulator\EMC PARTNER\ESD3000		Jul. 02, 2009	Jul. 01, 2010
Climatic Condition	Ambient Temperature: <u>23</u> °C                      Relative Humidity: <u>53</u> % RH Atmospheric Pressure: <u>989</u> mbar		
Power Supply System	AC Power: <u>230</u> Vac <u>50</u> Hz		
Test Set-up	Table-top Equipment		

Test Points	Contact Discharge (kV): Criterion					Air Discharge (kV): Criterion					Test times and voltage at each condition	
1.EUT-VCP	■ 2: <u>A</u>	■ 4: <u>A</u>	□ 6: _	□ 8: _	□ _: _	□ 2: _	□ 4: _	□ 8: _	□ 15: _	□ _: _	■ 10..neg	■ 10..pos
2.EUT-HCP	■ 2: <u>A</u>	■ 4: <u>A</u>	□ 6: _	□ 8: _	□ _: _	□ 2: _	□ 4: _	□ 8: _	□ 15: _	□ _: _	■ 10..neg	■ 10..pos
3.EUT-charge point	■ 2: <u>A</u>	■ 4: <u>A</u>	□ 6: _	□ 8: _	□ _: _	□ 2: _	□ 4: _	□ 8: _	□ 15: _	□ _: _	■ 10..neg	■ 10..pos
4.EUT-Top Side	□ 2: _	□ 4: _	□ 6: _	□ 8: _	□ _: _	■ 2: <u>A</u>	■ 4: <u>A</u>	■ 8: <u>A</u>	□ 15: _	□ _: _	■ 10..neg	■ 10..pos
5.EUT-Bottom Side	□ 2: _	□ 4: _	□ 6: _	□ 8: _	□ _: _	■ 2: <u>A</u>	■ 4: <u>A</u>	■ 8: <u>A</u>	□ 15: _	□ _: _	■ 10..neg	■ 10..pos
5.EUT-Front Side	□ 2: _	□ 4: _	□ 6: _	□ 8: _	□ _: _	■ 2: <u>A</u>	■ 4: <u>A</u>	■ 8: <u>A</u>	□ 15: _	□ _: _	■ 10..neg	■ 10..pos
6.EUT-Rear Side	□ 2: _	□ 4: _	□ 6: _	□ 8: _	□ _: _	■ 2: <u>A</u>	■ 4: <u>A</u>	■ 8: <u>A</u>	□ 15: _	□ _: _	■ 10..neg	■ 10..pos
7.EUT-Right Side	□ 2: _	□ 4: _	□ 6: _	□ 8: _	□ _: _	■ 2: <u>A</u>	■ 4: <u>A</u>	■ 8: <u>A</u>	□ 15: _	□ _: _	■ 10..neg	■ 10..pos
8.EUT-Left Side	□ 2: _	□ 4: _	□ 6: _	□ 8: _	□ _: _	■ 2: <u>A</u>	■ 4: <u>A</u>	■ 8: <u>A</u>	□ 15: _	□ _: _	■ 10..neg	■ 10..pos

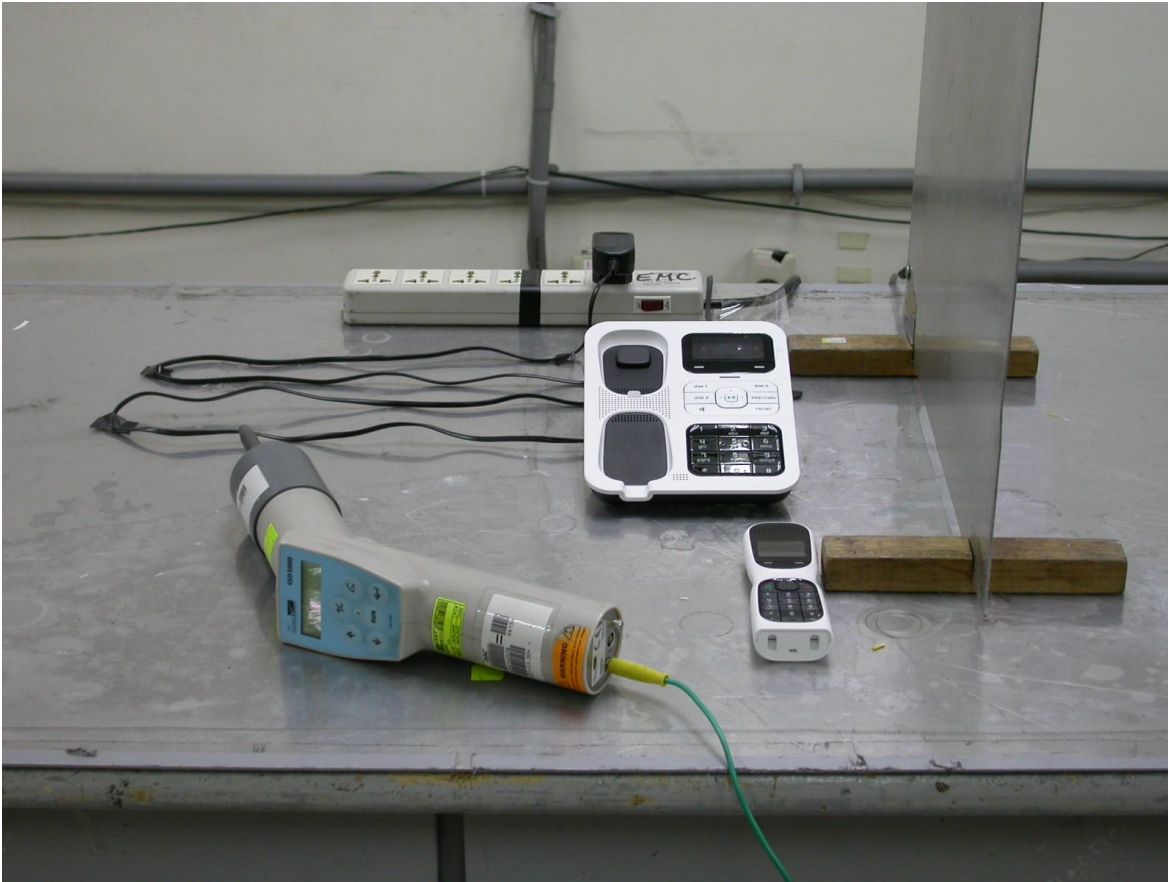
Result:	<input checked="" type="checkbox"/> Complied <input type="checkbox"/> Does not comply		
Criterion Required:	<u>B</u>	Criterion Met:	<u>A</u>

Note: “A” means the EUT operates with ☒ no loss of functions.

☒ no unintentional responses during and after test.

“--” means the test is not applicable.

#### 4.2.1.2 Electrostatic Discharge Test Setup Photos:



**4.2.2 Radio Frequency Electromagnetic Field (80~1000MHz and 1400~2700MHz):****4.2.2.1 Radio Frequency Electromagnetic Field Test Data:****A. Operating Conditions of the EUT: Talking Mode**

Test Date: Aug. 24, 2009

Test Specification	EN 61000-4-3:2006/A1:2008		
Test Equipment		Calibration Date	Recommended Recal. Date
Microphone\B&K\4134		Nov. 20, 2008	Nov. 19, 2009
Conditioning Amplifier\B&K\type 2690		Nov. 20, 2008	Nov. 19, 2009
Audio Analyzer\R&S\UPV		Jan. 30, 2009	Jan. 29, 2010
IMS Integrated Measurement System\R&S\IMS		Sep. 29, 2008	Sep. 28, 2009
RF Power Amplifier\AR\50S1G4AM1		Jun. 03, 2009	Jun. 02, 2010
RF Power Amplifier \AR\250W1000AM1		Jun. 03, 2009	Jun. 02, 2010
DECT Tester\R&S\CTS60		Mar. 03, 2009	Mar. 02, 2010
Climatic Condition	Ambient Temperature: <u>22</u> °C		

Frequency Range : <u>80 MHz ~ 1000 MHz</u> <u>1400 MHz ~ 2700 MHz</u>	Field Strength: <u>3</u> V/m	Modulation (AM 1kHz 80%)
Sweep Rate: $\leq 1.5 \times 10^{-3}$ decades/s	Step Size: $\leq 1$ % of preceding frequency value	Dwell Time: <u>2.9</u> s
Frequency Range (MHz)	Polarization of Device	Test Result
80~1000	Vertical	A
80~1000	Horizontal	A
1400~2700	Vertical	A
1400~2700	Horizontal	A

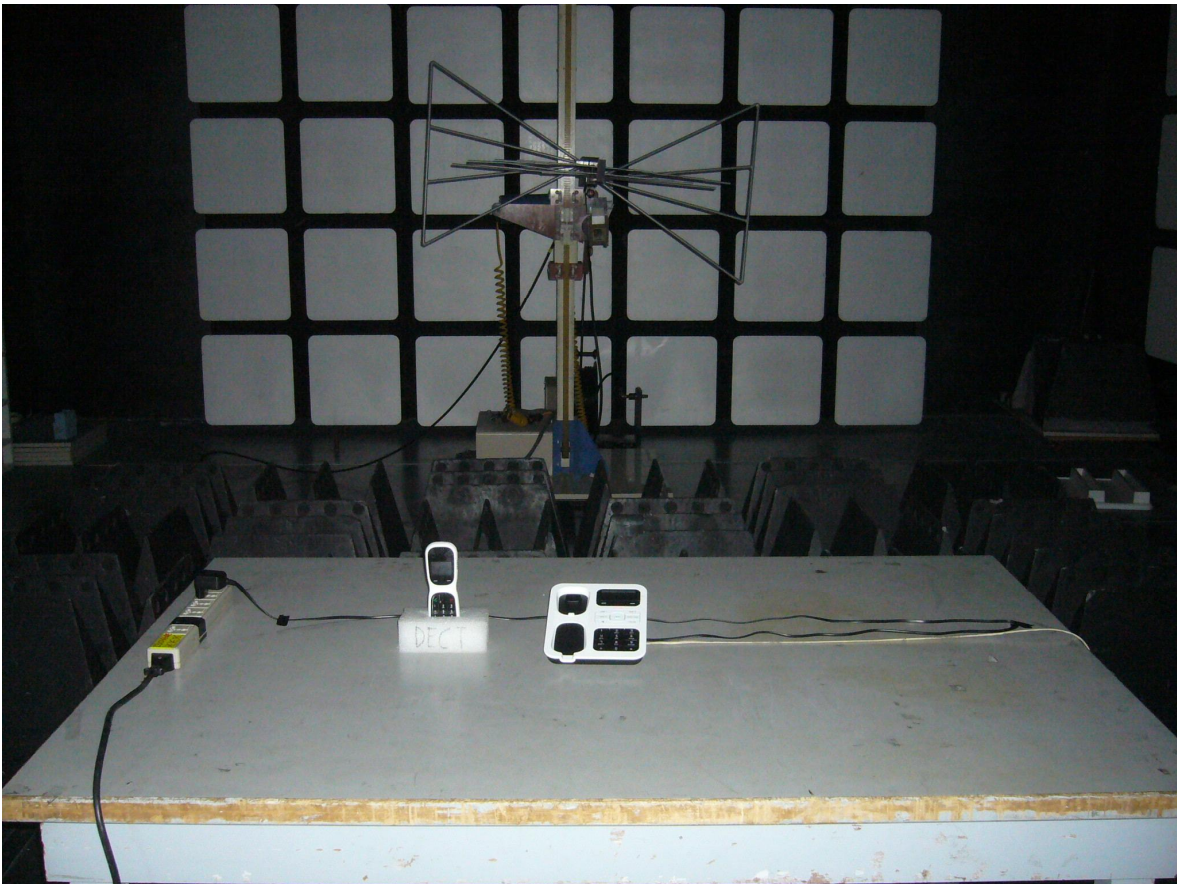
Note: “A” means the EUT operates with ■ BER less or equal than  $1 \times 10^{-3}$  during the test sequence.  
 ■ the speech output signal level at least 35dB less than the previously recorded reference level.  
 ■ no loss of user control functions or stored data and maintained communication link during and after the tests.  
 ■ no unintentional transmission.

Remarks: Testing has been conducted at 3-meter anechoic chamber.



#### 4.2.2.2 Radio Frequency Electromagnetic Field (80~1000MHz and 1400~2700MHz)

##### Test Setup Photos:

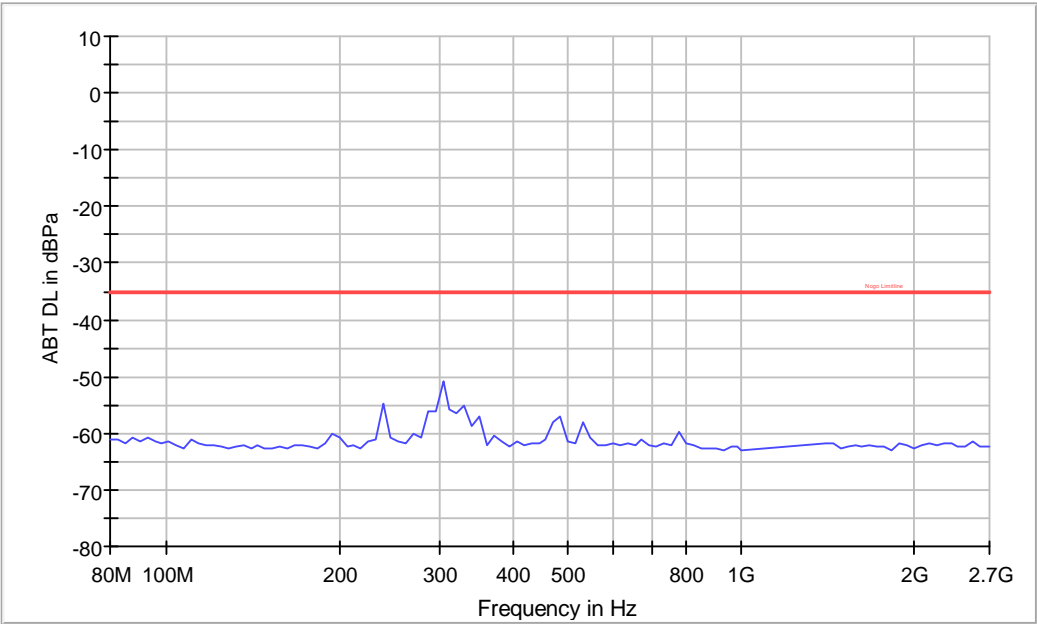




Common Information

Test Description:	Hor
Operating Conditions:	DL
Operator Name:	Eric
Comment:	

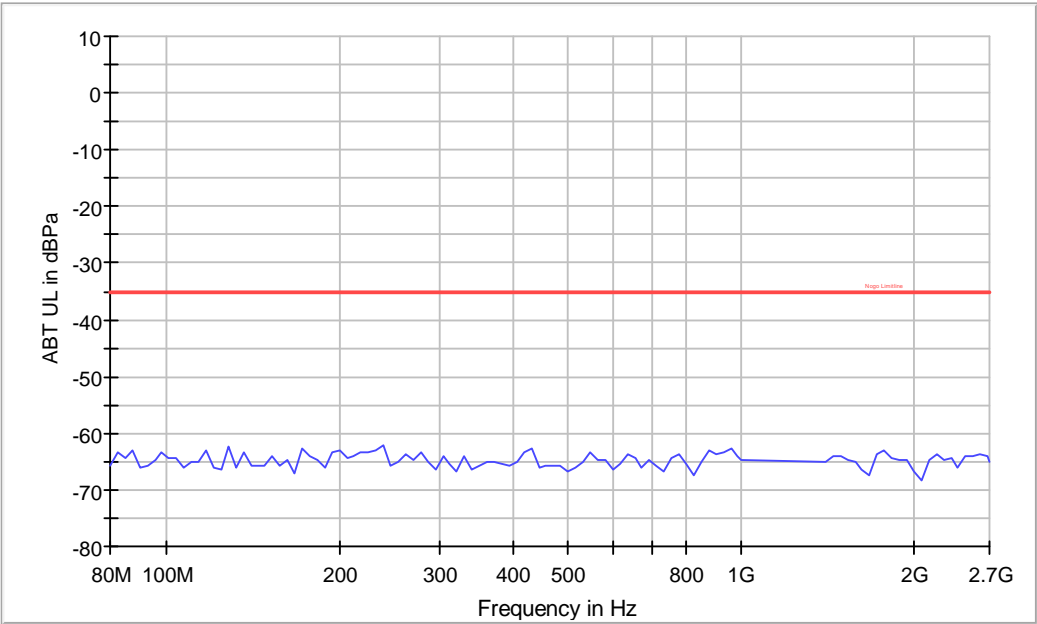
ABT DL



Common Information

Test Description:	Hor
Operating Conditions:	UL
Operator Name:	Eric
Comment:	

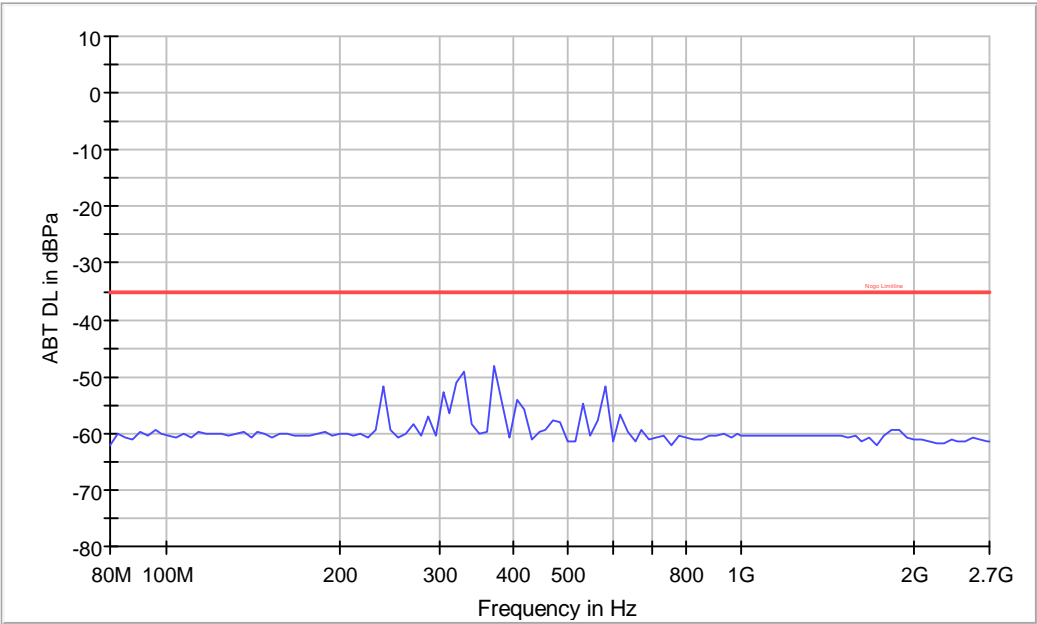
ABT UL



Common Information

Test Description:	Ver
Operating Conditions:	DL
Operator Name:	Eric
Comment:	

ABT DL



Common Information

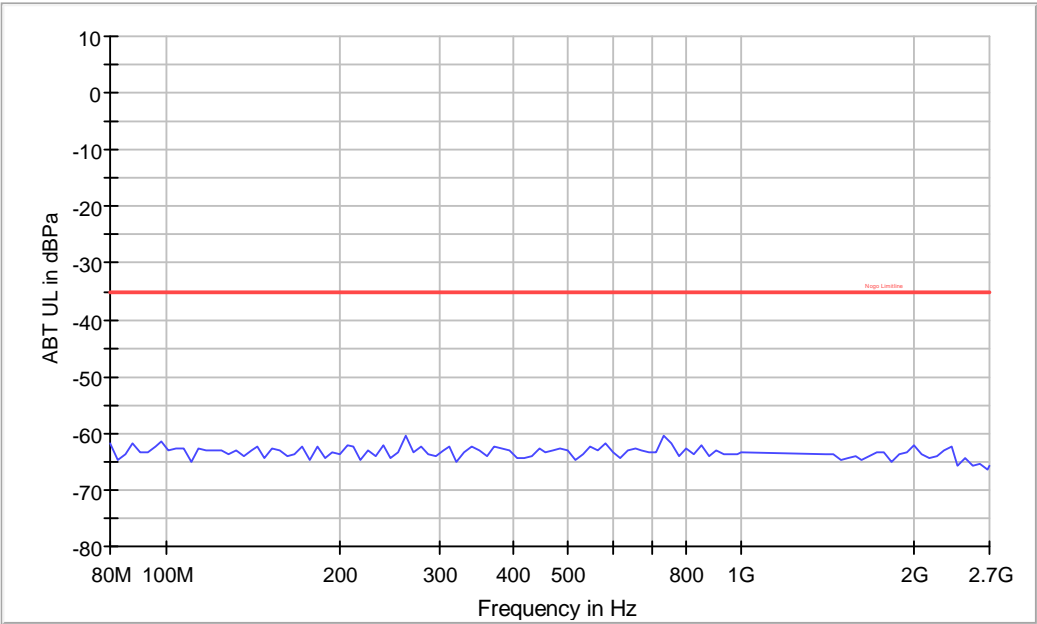
Test Description:Ver

Operating Conditions:UL

Operator Name:Eric

Comment:

ABT UL



**4.2.3 Fast Transients Common Mode:****4.2.3.1 Fast Transients Common Mode Test Data:****A. Operating Conditions of the EUT: Talking Mode**

Test Date: Jul. 23, 2009

Test Specification	EN 61000-4-4:2004		
Test Equipment		Calibration Date	Recommended Recal. Date
EFT Generator/Clamp\Noiseken\FNS-AXII		Oct. 02, 2008	Oct. 01, 2009
Climatic Condition	Ambient Temperature: <u>23</u> ° C		

Pulse: 5 /50ns Burst: 15ms /300ms		Repetition Rate: <u>2.5kHz</u> above 2.0kV <u>5kHz</u> below and equal 2.0kV		Test time: <u>1</u> min/each condition	
\Voltage\Polarity\ \Test Point\Mode\Result\		<u>1.0</u> kV		<u>0.5</u> kV	
		+	-	+	-
Power Line	L	A	A	--	--
	N	A	A	--	--
TEL Line		--	--	A	A

Note: “A” means the EUT operates with ■ no user noticeable loss of the communication Link.  
■ no loss of user control functions or stored data.  
■ no unintentional transmission.

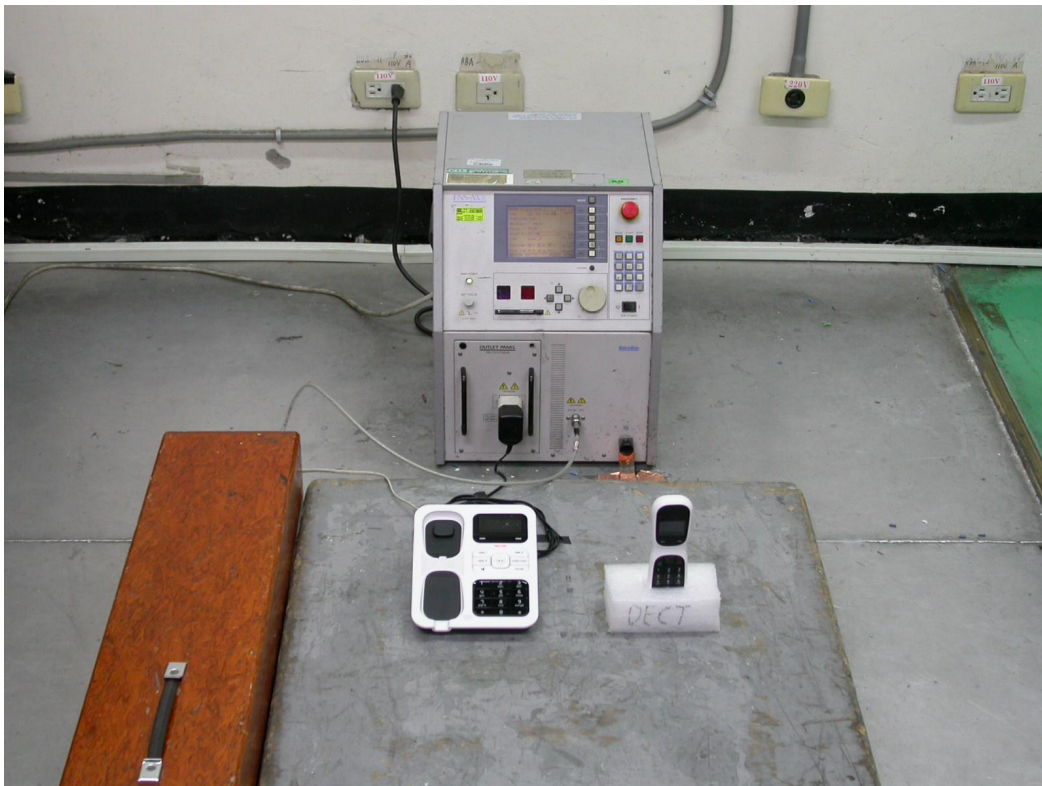
“--” means the test is not applicable.

#### 4.2.3.2 Fast Transients Common Mode Test Setup Photos:

##### 1. Power Line



##### 2. Tel Line



**4.2.4 Surge, Common and Differential Mode:****4.2.4.1 Surge, Common and Differential Mode Test Data:****A. Operating Conditions of the EUT: Talking Mode**

Test Date: Jul. 23, 2009

Test Specification	EN 61000-4-5: 2006		
Test Equipment		Calibration Date	Recommended Recal. Date
EMC Immunity Test System\THERMO\EMCPRO PLUS		Oct. 24, 2008	Oct. 23, 2009
Climatic Condition	Ambient Temperature: <u>23°</u> C		

Waveform: 1.2/50µs(8/20µs)		Repetition rate: <u>60</u> sec		Times: <u>5</u> times/each condition		
\Voltage \Mode \Polarity \Result		\Phase		<b>0°</b>	<b>90°</b>	<b>180°</b>
1.0 kV	L – N	+	A	A	A	A
		–	A	A	A	A

Waveform: 1.2/50µs(8/20µs)		Repetition rate: <u>60</u> sec		Times: <u>5</u> times/each condition		
\Voltage		<u>0.5</u> kV		<u>0.5</u> kV		
\Turn earth		TIP		RING		
\Testing mode \Result \Polarity		+	–	+	–	
TEL Line		A	A	A	A	

Note: “A” means the EUT operates with

- no user noticeable loss of the communication Link.
- no loss of user control functions or stored data.
- no unintentional transmission.

#### 4.2.4.2 Surge, Common and Differential Mode Test Setup Photos:





**4.2.5 RF Common Mode, 0.15MHz~80MHz:****4.2.5.1 RF Common Mode, 0.15MHz~80MHz Test Data:****A. Operating Conditions of the EUT: Talking Mode**

Test Date: Aug. 24, 2009

Test Specification	EN 61000-4-6: 2007		
Test Equipment		Calibration Date	Recommended Recal. Date
Microphone\B&K\4134		Nov. 20, 2008	Nov. 19, 2009
Conditioning Amplifier\B&K\type 2690		Nov. 20, 2008	Nov. 19, 2009
Audio Analyzer\R&S\UPV		Jan 30, 2009	Jan 29, 2010
IMS Integrated Measurement System\R&S\IMS		Sep. 29, 2008	Sep. 28, 2009
Wideband RF Power Amplifier\AR\250A250AM1		May 27, 2009	May 26, 2010
801-6 Coupling Network-M2\FCC\4412-025		Nov. 27, 2008	Nov. 26, 2009
801-6 Coupling Network-T2\FCC\FCC-801-T2		Nov. 27, 2008	Nov. 26, 2009
DECT Tester\R&S\CTS60		Mar. 03, 2009	Mar. 02, 2010
Climatic Condition	Ambient Temperature: <u>22</u> °C                      Relative Humidity: <u>51</u> % RH		
Power Supply System	AC Power: <u>230</u> Vac <u>50</u> Hz		
Test Set-up	Table-top Equipment		

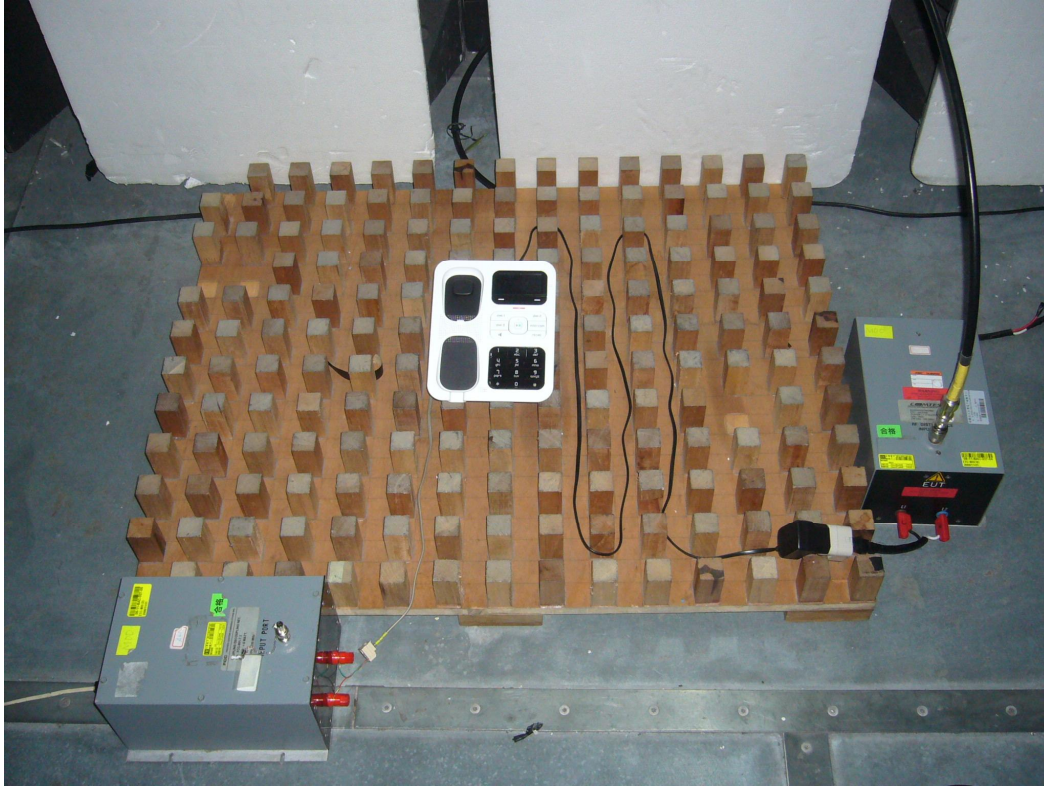
Frequency Range: <u>0.15</u> MHz ~ <u>80</u> MHz	Test Voltage: <u>3</u> V	Modulation (AM 1kHz 80%)	
Sweep Rate: $\leq 1.5 \times 10^{-3}$ decades/s	Step Size: $\leq 1$ % of preceding frequency value	Dwell Time: <u>2.9</u> s	
Frequency Range (MHz)	Tested Line	Test Result	
0.15~80	Power Line (M2)	A	
0.15~80	Tel. Line (T2)	A	

Note: “A” means the EUT operates with

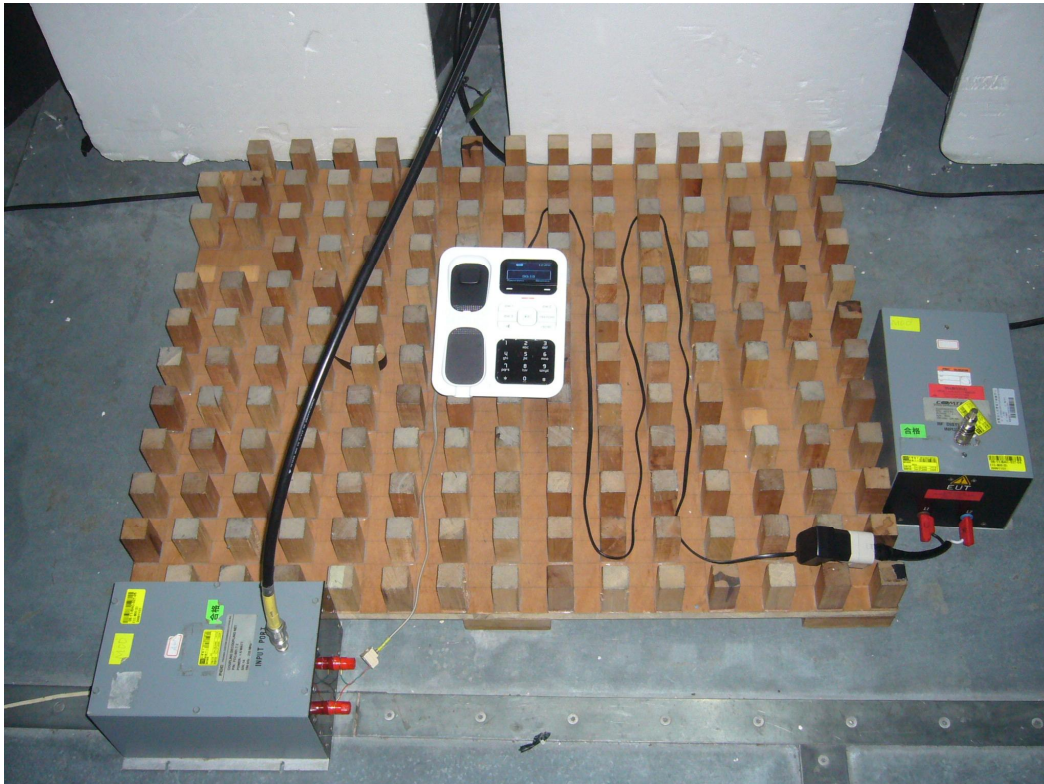
- BER less or equal than  $1 \times 10^{-3}$  during the test sequence.
- the speech output signal level at least 35dB less than the previously recorded reference level.
- no loss of user control functions or stored data and maintained communication link during and after the tests.
- no unintentional transmission.

#### 4.2.5.2 RF Common Mode, 0.15MHz~80MHz Test Setup Photos:

##### 1. Power Line



##### 2. Tel Line



Common Information

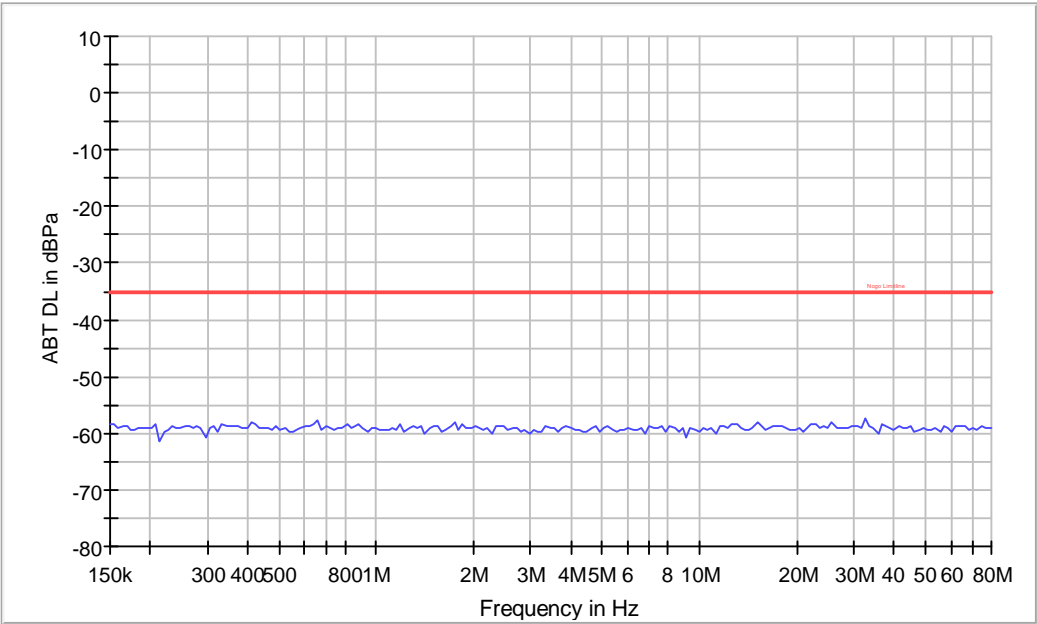
Test Description:POWER

Operating Conditions:DL

Operator Name:Eric

Comment:

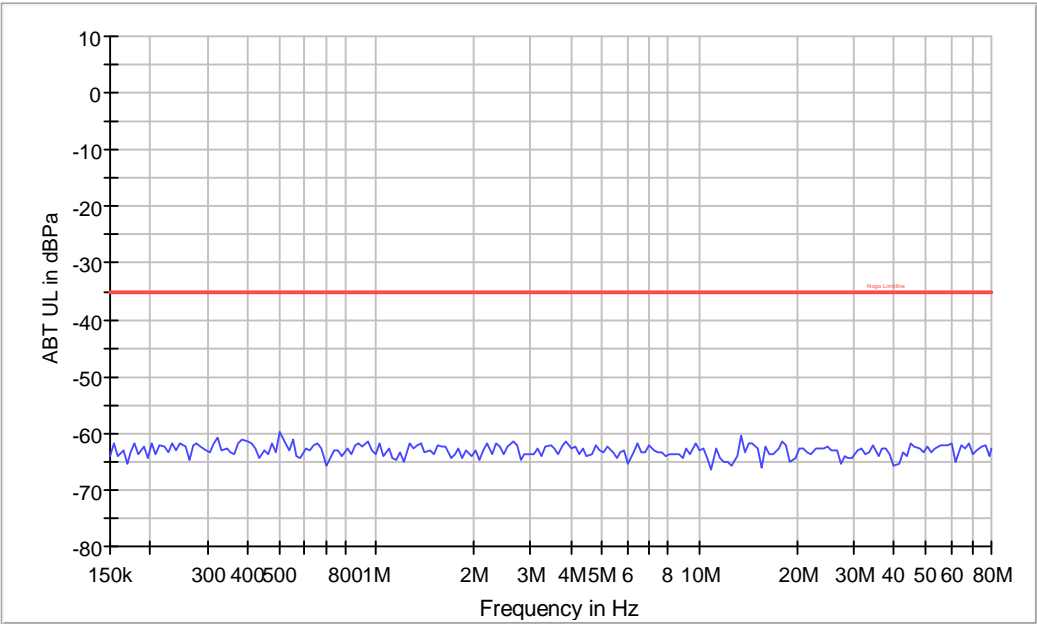
ABT DL



Common Information

Test Description:	POWER
Operating Conditions:	UL
Operator Name:	Eric
Comment:	

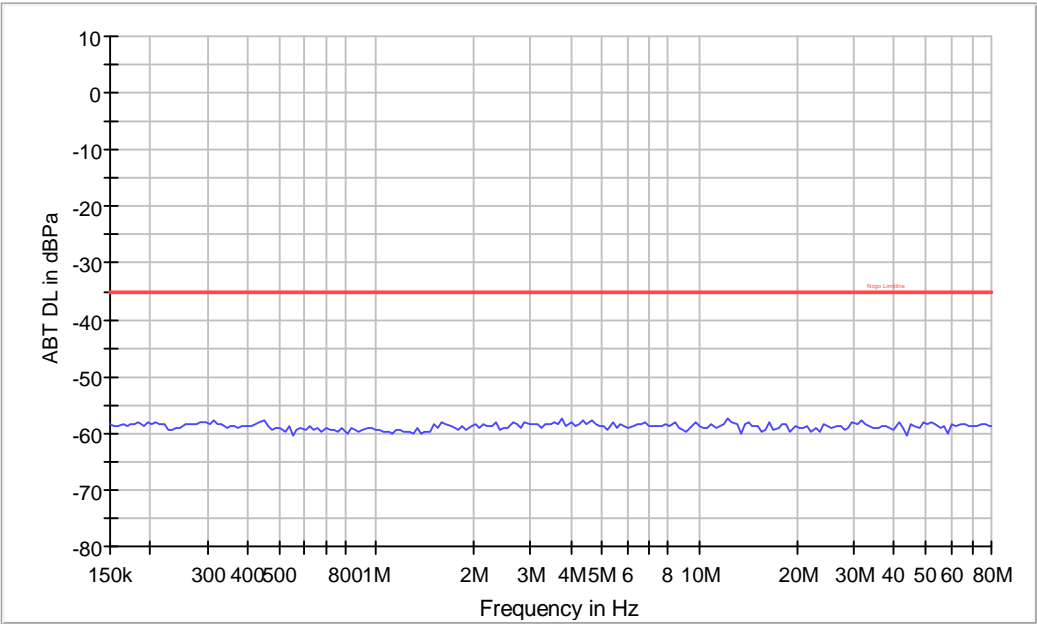
ABT UL



Common Information

Test Description:	TEL
Operating Conditions:	DL
Operator Name:	Eric
Comment:	

ABT DL



Common Information

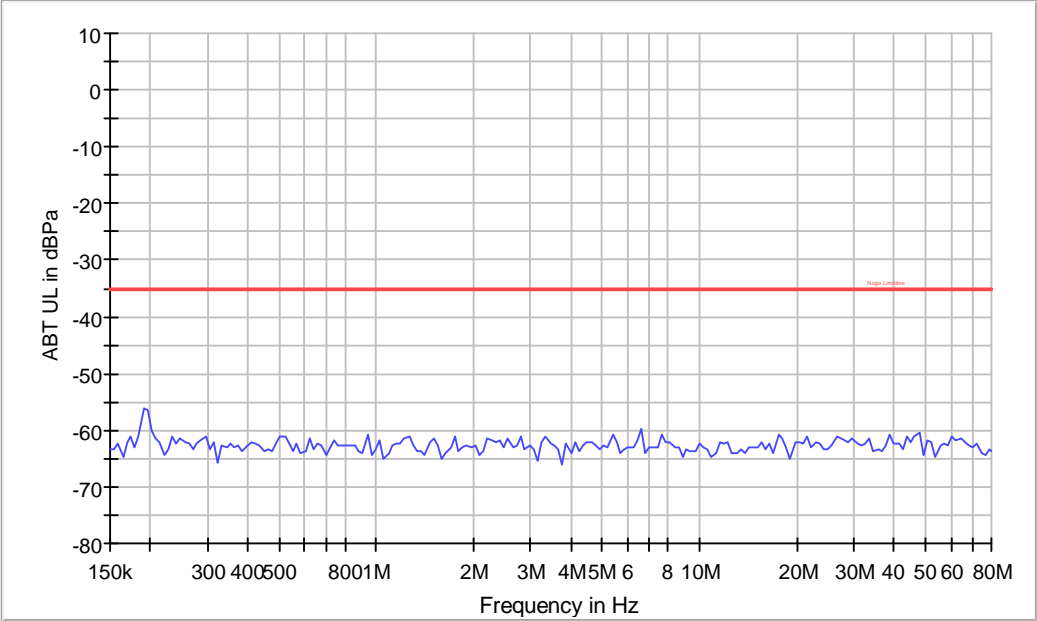
Test Description: TEL

Operating Conditions: UL

Operator Name: Eric

Comment:

ABT UL






**4.2.6 Voltage Dips and Interruptions:****4.2.6.1 Voltage Dips and Interruptions Test Data:****A. Operating Conditions of the EUT: Talking Mode**

Test Date: Jul. 23, 2009

Test Specification	EN 61000-4-11:2004		
Test Equipment		Calibration Date	Recommended Recal. Date
EMC Immunity Test System\THERMO\EMCPRO PLUS		Oct. 24, 2008	Oct. 23, 2009
Climatic Condition	Ambient Temperature: <u>22°</u> C Relative Humidity: <u>53 %</u> RH Atmospheric Pressure: <u>992</u> mbar		
Power Supply System	AC Power: <u>230</u> Vac <u>50</u> Hz		
Test Set-up	Table-top Equipment		

Test mode	Voltage dips	Durations (ms)	Interval (s)	Times	Phase	Result
Voltage interruptions	100%	5000	10	12	0° / 180°	C
Voltage dips in %U <sub>T</sub>	100%	10	10	12	0° ~360° Step 45°	A
	100%	20	10	12	0° ~360° Step 45°	A
	30%	500	10	12	0° ~360° Step 45°	A

Note: “ A ” means the EUT operates with  no user noticeable loss of the communication Link.  
 no loss of user control functions or stored data.  
 no unintentional transmission.

“ C ” means the EUT function was not correct during the test, which was recovered by operator after test.



#### 4.2.6.2 Voltage Dips and Interruptions Test Setup Photos:





**1. Outside view 1 of EUT (Adaptor)**



**2. Outside view 2 of EUT (Adaptor)**

